



COOL CYBER GAMES

Interactive Web Application for Cybersecurity Learning

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Milestone 2 Overview



Milestone 2 Matrix



Milestone 2 Tasks Discussion



Milestone 3 Matrix



Milestone 3 Task Discussion

01

Milestone 2 Completed Tasks

Task	Completion %	Anthony	Matthew	Brice	Ben	To Do:
Research, plan, and begin implementing more game development ideas	100%	25%	25%	25%	25%	Finish game planning details and begin implementing
Create a survey and gather user feedback	75%	25%	50%	0%	0%	Send out to more people and compile results
Implement, test, improve & demo: <i>Game 1(Malware Maze)</i>	80%	10%	70%	0%	0%	Finish prettifying (add transitions and sound effects)



02

Milestone 2 Task Discussion



Research

■ Game 2: Master the Password

- Researched password creation, security tips, brute force techniques.
- Concept -
 - The player is an explorer in the medieval era, where passwords are used to reach the next area; with the goal of reaching the castle.
 - Each area teaches a new security concept that strengthens the player's password.
 - The final challenge is to reach the castle, requiring an ultra-strong password.

■ Game 2: TBD

- Researched reverse engineering basics, interactive x86 simulations, and the basics of binary exploitation.
- Concept - Interactive x86 simulation, inspired by Human Resource Machine teaching and gameplay

■ Game 3: TBD

- Researched web elements (HTML,CSS,JS) as well as SQL Injection and Cross-site Scripting (XSS)
- Concept - Game for web elements - Inspired by Mario
 - Player will navigate levels defeating enemies like in Mario. Puzzles in levels will teach players about web elements

Survey



→ <https://forms.gle/cZUfPkn8jKscy9wt7>

Cool Cyber Games Feedback



B *I* U

Thank you for trying out our game! Your responses will help us refine the game and make it even better! This survey will take *less than 3 minutes* to complete, *all multiple-choice*. Any and all feedback is very much appreciated.

Go to: <https://coolcybergames.com>, and explore our website and try out our first cybersecurity game, Malware Maze!

We'd love to hear your thoughts on:

The website, log-in system, gameplay, UI/UX design, ease of use and what you learned!



Consent to be Part of a Research Study

Title of the Project: Interactive Learning with Gaming concept for Cyber Security Education

Principal Investigator: Dr. Sneha Sudhakaran, ssudhakaran@fit.edu, Assistant Professor, Department of Computer and Engineering Sciences You are invited to participate in a research study. Participation in this research study is voluntary. The information provided is to help you decide whether to participate. If you have any questions, please ask.

Important Information You Need to Know

- The purpose of this study is to identify the issues that general users face when they begin learning about different concepts in cybersecurity. This research will provide insight into the challenges users currently experience, as well as additional factors that should be addressed to make cybersecurity education less stressful, more informative, and ultimately beneficial for future learners.
- You will be asked to participate to evaluate the effectiveness of the study on gaining insights on the experiences faced during your study and this survey is absolutely voluntary and anonymous.
- If you choose to participate, we will provide you with a step-by-step demo. Afterward, you will be asked to answer a pre-questionnaire in an electronic form. We will ask you to answer questions on a Google Doc form on your experiences, demography, and related questions which are voluntary, and your responses will be recorded. Your total participation time including the demonstration and the participation in the tasks and answering post-questionnaire is expected to take up to **20 minutes**.
- No risk or discomfort from participation is anticipated. Your participation will be **voluntary**.
- The contribution you will make in this study and afterward the derived analytical results may benefit everyone who is doing research in the respective areas.
- If you choose not to participate, you may stop anytime. You will not be treated any differently if you decide not to participate in the study once you have started.

Feedback



- **26F (Pre-Med student) (6/10)** - Enjoyed the game and concept a lot. Add HUD, condense learning screen
- **49F (Healthcare worker) (1/10)** - Found the game very informative as a beginner. Needs more feedback on wrong answers (explanations), and clearer hints on what to do next. Suggests adding text message/phone call phishing scenarios.
- **20M (Unemployed) (5/10)** - Learned more than expected. Suggests class-based cosmetics (Knight, Mage, etc.), hidden Easter eggs, and lifelines to eliminate wrong answers. Wants click-through dialogue for slower readers.
- **51M (Land-Surveyor) (3/10)** - Prefers smaller learning chunks with more mini-bosses to test knowledge gradually. Wants a final boss fight, animations (ex. ghosts in maze), and a heart-based system (lose all, restart). Suggests password security and Frogger-style phishing mini-games.
- **44F (Healthcare worker) (7/10)** - Likes email scenarios with “choose all that apply.” Wants wrong answers to show *why* they are incorrect. Suggests making the learning screen visually appealing with a theme.
- **54M (IT/Networking specialist) (9.5/10)** - Likes phishing tips and sees value in using this for client education. Suggests adding hover-over link previews, clue-based rooms (like *Among Us*), and preventing repeat questions on terminals. Suggests a Jenga-style cybersecurity game.



Game Improvements

Malware Maze -

- 1. Improved Learning Hub
- 2. Improved game UI and HUD
- 3. Added more sound effects and smooth transitions
- 4. Improved game dialogue and feedback system
- 5. Added score tracking and lives

03

Demo

→ <https://coolcybergames.com>

05

Milestone 3 Tasks

Task	Anthony	Matthew	Brice	Ben
Enhance website UI further	X	X	-	-
Finish API connections for the game 1	X	X	-	-
Distribute and collect survey results	X	X	X	X
Implement Test Demo Game 2	X	-	-	-
Implement Test Demo Game 3	-	-	X	-
Implement Test Demo Game 4	-	-	-	X



07

Milestone 3 Task Discussion

Tasks Discussion



- Enhance Website UI - Refine the website UI. Key focus areas include player dashboard with progress tracking, game filters, and continue developing our theme.
- Distribute and collect survey results - Gather feedback on game usability, engagement, and learning effectiveness to refine future content
- Finish API connections for Game: Malware Maze - Enable progress and score tracking, and authentication
- Complete and Polish: Malware Maze - refining gameplay, UI improvements, adding missing mechanics and playtesting all elements.
- Implement Test Demo Game 2 - Development will begin on Game 2, focusing on core mechanics and interactive components.
A functional test demo will be created for feedback and iteration.
- Implement Test Demo Game 3 - Development will begin on Game 3, focusing on core mechanics and interactive components.
A functional test demo will be created for feedback and iteration.
- Implement Test Demo Game 4 - Development will begin on Game 4, focusing on core mechanics and interactive components.
A functional test demo will be created for feedback and iteration.



Thank you!

Any Questions?